

REMARKS

The present invention is a method and a terminal for displaying information on a display of a terminal. With an embodiment of the invention, the information includes elements which are either of a continuous length as, for example, illustrated as elements 120, 125 and 130 in Fig. 4a which present a length which is equal to or greater than the size of a display 3 or a wrapped length, such as illustrated by elements 205, 210, 215 and 220 in Fig. 4b which is less than the size of the display.

The display 3 is further provided with a user interface including a menu structure of items such as illustrated in Figs. 4a and 4b. A method in accordance with the invention comprises the steps of providing in the menu structure a selectable continuous length item and a wrapped length item. The continuous length item or the wrapped length item are selected in the menu structure of the user interface. The information is displayed according to the selection made in the menu structure of the user interface, in order to allow a user to toggle between continuous length and the wrapped length.

The Examiner has required a new oath or declaration. A new declaration is submitted herewith.

The Specification and Abstract have been amended to improve the form of the application for reexamination.

Claims 1, 3, 5, 7 and 9 stand objected to in view of the misspelling of the word "continuous" and further claims 1 and 5 stand rejected as being indefinite regarding the recitation of "and/or". The newly submitted claims have been amended to recite

a continuous length item and a wrapped length item in identifying the selectable items.

Claims 1-9 stand rejected under 35 U.S.C. §102(e) as being clearly anticipated by United States Patent 6,147,670 (Rossmann). These grounds of rejection are traversed for the following reasons.

As the Examiner is aware, for an anticipation rejection to be correct, each element of the anticipated claim must be literally or inherently present in the reference. When this standard is applied to Rossmann, newly submitted claims 10-27 are not anticipated. Moreover, claims 10-27 are not obvious therefrom.

Each of the independent claims in reciting a method for displaying information on a display or a terminal for displaying information on a display in substance requires the display of information on a display including elements either of a continuous length presenting a length which is equal to or greater than the size of the display or a wrapped length presenting a length which is less than the size of the display. The display is further part of a user interface including menu structure items. The selection of the continuous length item and a wrapped length item is through the menu structure.

The Examiner relies upon Rossmann's disclosure in column 5, lines 29-36, as meeting the selection of continuous length or wrapped length items through the input of keystrokes. The Examiner is correct that Rossmann does teach the display of continuous length or wrapped length via a character key. However, it is submitted that the character key is not described in Rossmann as being part of a user interface including a menu structure of items with those items including the selection of a continuous length item and a wrapped length item via the menu structure of the user

interface. A keystroke selection does not meet the aforementioned recitations in each of the independent claims.

It is submitted that a person of ordinary skill in the art would not consider Rossmann's teaching that a keystroke may be used to select continuous length or wrapped length display as representing the claimed utilization of the user interface including the menu structure as recited in the independent claims to obtain display of continuous length or wrapped length. Moreover, it is submitted that the subject matter of dependent claims 11-13 and 15-17 define further more specific aspects of the present invention which are not anticipated by Rossmann or rendered obvious therefrom.

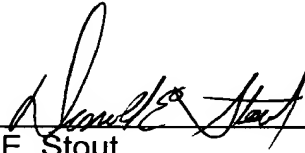
Newly submitted claims 19-27 have been added to further limit the independent claims in reciting, " the display displays the menu structure provided by the interface and a user selects from the display of the menu structure to have a display of said continuous length item or said wrapped length item by providing an input through the interface indicating the selection of the continuous length item or said wrapped length item." Rossmann's teaching is only that a single keystroke may be utilized to obtain the selection of a continuous length or a wrapped length display which does not anticipate or render obvious the subject matter of dependent claims 19-27 which require the selection from the menu structure via the display of the selection items.

In view of the foregoing amendments and remarks, it is submitted that each of the claims in the application is in condition for allowance. Accordingly, early allowance thereof is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (1030.39878X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

A handwritten signature in black ink, appearing to read "Donald E. Stout", is written over a horizontal line.

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Attachments

DES:dlh

SUBSTITUTE SPECIFICATION

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Title of the InventionRadio TerminalA radio terminal

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Background of the inventionBACKGROUND OF THE INVENTIONField of the Invention

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[0001] The present invention relates to a terminal and a method thereto for displaying information on a small display.

Description of the Prior Art

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[0002] Some handheld devices, such as personal digital assistants (PDA), cellular phones, pagers as well as desk-top telephones, are capable of receiving and displaying different kind of information. This information is typically elements comprising a text based on alpha-numerical signs, but the elements can also comprise graphics. However, these types of devices uses a display of rather small size, which some users may experience as difficult to monitor. The difficulty lays often in how the information is presented on the display, which might differ depending on the information provider and/or the device itself.

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[0003] One way of displaying the information would be to wrap a-text and feed it vertically down the display, which might be preferable if the text is longer than the width of the display. If the text is longer than what can be continued in the number of lines displayable in the display, the text is being clipped vertically, causing the remaining text can'to be accessed-accessable by scrolling the text downwards. The scrolling could either be done manually,

e.g. for example, by pressing on a pre-defined key which activates the scrolling function, or automatically.

5 **[0004]** Another way of displaying information could be to display a-text which is continuous, i.e. ~~a~~-that is text which is shown on a single line. If the text is longer than the width of the display, the text can be scrolled across the display either manually, e.g. for example, by pressing on a pre-defined key which activates the scrolling function, or automatically.

10 **[0005]** Also, these two ways of displaying, can be combined dynamically by the provider and/or the manufacturer. Thus, if some parts ~~is~~-are considered as easier to monitor when displayed in one way, and vice versa, then the provider and/or the manufacturer can display the information in the preferred way. For example, the elements can be links displayed in a list, which can be
15 scrolled down vertically. In order to do this quickly, it might be preferable to display the list as continuous text. However, if the elements are initially showing the same content on the display, and the remaining parts are not visible, then it might be preferred to wrap the text.

20 **[0006]** Here is an example of three elements to be displayed:

<http://wap.nokia.com/club.wml>

<http://wap.nokia.com/stock.wml>

<http://wap.nokia.com/net.wml>

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[0007] Here is an example of how these three elements can be displayed as continuous text, which initially showing the same content on the display:

<http://wap.nokia.com/...>

30 <http://wap.nokia.com/...>

<http://wap.nokia.com/...>

[0008] Here is another example of how these three elements can be displayed as wrapped text:

5 [http://wap.nokia.com/
club.wml](http://wap.nokia.com/club.wml)
 [http://wap.nokia.com/
stock.wml](http://wap.nokia.com/stock.wml)
 [http://wap.nokia.com/
10 net.wml](http://wap.nokia.com/net.wml)

[0009] Both of these two alternatives can be useful depending on what the user would like to do. However, there are very few possibilities for the user to affect the elements. Therefore, there is a need to improve and facilitate the possibilities to display the information on a display.

Summary of the invention

SUMMARY OF THE INVENTION

20 **[0010]** According to one aspect of the present invention there is provided a method for displaying information on a display, where the information is provided with elements. An element is either having a continuous length presenting a length which is equal to or greater than the size of said display, or a wrapped length presenting a length which is less than the size of said display. The display is further provided with a user interface having a menu structure of items. The user interface is provided with a selectable continuous length item and/or a wrapped length item. The information is displayed according to the selection made in the menu structure of the user interface, in order to allow the user to toggle between continuous length and wrapped length.

[0011] According to another aspect of the present invention there is provided a terminal for displaying information on a display. The information comprising elements, wherein an element is either provided with a continuous length presenting a length which is equal to or greater than the size of the display, or a wrapped length presenting a length which is less than the size of the display. The terminal ~~comprising~~ comprises a display for displaying the information, and a user interface provided with a menu structure comprising a selectable continuous length item and/or a wrapped length item. The items are arranged to display the information according to a selection made in the menu structure, in order to allow the user to toggle between continuous length and wrapped length.

[0012] According to a third aspect of the present invention there is provided a terminal for displaying information on a display. The information comprising elements, wherein an element is either provided with a continuous length presenting a length which is equal to or greater than the size of the display, or a wrapped length presenting a length which is less than the size of the display. The terminal ~~comprising~~ comprises a display for displaying the information, means for setting a first type of elements to be displayed as a continuous length item and a second type of element to be displayed as a wrapped length item. Also, the terminal ~~comprising~~ comprises means for identifying the first type of element when acting in a text to be displayed, and means for displaying the first and second type of elements according to their setting.

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Brief description of the drawings

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] For a better understanding of the present invention and to understand how the same may be brought into effect reference will now be made by way of example only to the accompanying drawings in which:

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[0014] ~~Figures Figs.~~ 1 and 2 schematically illustrate a radio handset ;

[0015] ~~Figure Fig.~~ 3 is a flowchart illustrating one aspect of the present invention; and

[0016] ~~Figure Fig.~~ 4 illustrates a user interface according to an embodiment of the present invention.

10 DETAILED DESCRIPTION OF THE INVENTION

[0017] Fig. 1 shows a preferred embodiment of a terminal, hereafter also referred as a phone, according to a preferred embodiment of the invention. The phone, which is generally designated by 1, comprises a user interface having a keypad 2, a display 3, an on/off button 4, a speaker 5, a microphone 6a and a transducer 6b. The phone 1 according to the preferred embodiment is adapted for communication via a wireless telecommunication network, e.g. for example a cellular network. However, the phone could also have been designed for a cordless network. The keypad 2 has a first group 7 of keys as alphanumeric keys, by means of which the user can enter a telephone number, write a text message (SMS), write a name (associated with the phone number), etc. Each of the twelve alphanumeric keys 7 is provided with a figure "0-9" or a sign "#" or "*", respectively. In alpha mode each key is associated with a number of letters and special signs used in text editing.

25 **[0018]** The keypad 2 additionally comprises two soft keys 8, two call handling keys 9, and a navigation key 10.

30 **[0019]** The two soft keys 8 have a functionality corresponding to what is known from the phones Nokia 2110™, Nokia 8110™ and Nokia 3810™. The functionality of the soft key depends on the state of the phone and the navigation in the menu by using a navigation key. The present functionality of

also forms the interface to the peripheral units of the apparatus, including a RAM memory 17a and a Flash ROM memory 17b, a SIM card 16, the display 3 and the keypad 2 (as well as data, power supply, etc.). The controller means 18 communicates with the transmitter/receiver circuit 19. The audio part 14 speech-decodes the signal, which is transferred from the controller 18 to the earpiece 5 via a D/A converter (not shown).

[0024] Also, the audio part 14 is also able to give an output of a ring tone to the buzzer 6b. The ring tone can be stored in either of the memories 17a,b, and is recalled when the receiver 19 receives an incoming signal, by means of the controller 18. Thus, the ring tone is recalled from the memory, forwarded to the audio part 14, and the ring tone is generated as an output from the buzzer 6b.

[0025] The controller means 18 is connected to the user interface. Thus, it is the controller means 18 which monitors the activity in the phone and controls the display 3 in response thereto.

[0026] Therefore, it is the controller means 18 which detects the occurrence of a state change event and changes the state of the phone and thus the display text. A state change event may be caused by the user when he ~~activates~~ activating the keypad including the navigation key 10, and these types of events are called entry events or user events. However, the network communicating with the phone may also cause a state change event. This type of event and other events beyond the user's control are called non user events. Non user events comprise status change during call set-up, change in battery voltage, change in antenna conditions, message on reception of SMS, etc.

[0027] ~~Figure~~ Fig. 3 shows a flowchart over a method for displaying information on a display, in accordance with the present invention. The

information is provided with elements. An element is either having a continuous length presenting a length which is equal to or greater than the size of the display, or a wrapped length presenting a length which is less than the size of said display. The display is further provided with a user interface having a menu structure of items.

[0028] In order to allow the user to toggle between continuous length and wrapped length, the user is first able to select a display menu "SELECT DISPLAY MENU". In this menu, the user interface is provided with a selectable continuous length item and/or a wrapped length item "SELECT AN ITEM". If the present text is set as wrapped text, and the user would like to change it into continuous text, the user would perhaps like to choose the continuous length item, "CONT. OR WRAPPED?". Thereafter, the information is finally displayed according to the selection made in the menu structure of the user interface, which in this case was "DISPLAY TEXT CONTINUOUSLY".

[0029] As an alternative solution, in accordance with the present invention, the selection could be done automatically. This is done by providing the terminal with means for setting a first type of elements to be displayed as a continuous length item and a second type of element to be displayed as a wrapped length item. The terminal also ~~comprising~~ comprises means for identifying the first type of element when acting in a text to be displayed, and means for displaying the first and second type of elements according to their setting.

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[0030] With reference to Fig. 4a and 4b, an example is shown on how the display in a user interface can act by interaction of the user according to the present invention. The user interface may comprise the same elements as shown in Fig.1, i.e. a keypad 2, a display 3, an on/off button 4, a speaker 5 and a microphone 6. Also, it is the control means 18 in Fig. 2 which controls the user interface. Starting from Fig. 4a, there is a layout 30 presented on a

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display in a phone, as shown in Fig.1 and 2, which indicates signal strength 35 from the wireless telecommunication network "D1 Telekom" 40, the battery power 45 and a clock showing the time 50 in hours and minutes. Preferably, the display in the phone is an LCD (Liquid Crystal Display) display. The display, can be controlled by the control means 18 as shown in Fig. 2. The layout 30 presents an example of the phone in idle mode, i.e. when the phone is activated and awaiting an action, e.g. for example an incoming or outgoing call. In the bottom of the display there are two items which are denoted as "Menu" 55 and "Names" 60. If the user selects "Names" 60 he/she can e.g., for example, access a built in phone book. If the user selects "Menu" 55, he/she can select among several different menus. The actual selection of features in the bottom of the display, like "Menu" and "Names", can be selected by means of the soft keys disclosed with reference to Fig. 1.

15 **[0031]** One of the menus can be the next layout 65 called "Browser" 70. If the user chooses to use this menu, he/she can access different telecom related information services, e.g. for example Internet. One way of accessing this kind of information is to use the Wireless Application Protocol, WAP. The Wireless Application Protocol (WAP) is a result of continuous work to define an industry wide standard for developing applications over wireless communication networks. WAP is disclosed in the Wireless Application Protocol Architecture Specification; Version 30-Apr-1998; by Wireless Application Protocol Architecture Working Group.

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25 **[0032]** If the user chooses to select "Home" 71, this may lead to the next layout 75, which graphically indicates, "Connecting to Service" 80. This shows an example of how the phone is trying to establish a connection to e.g., for example Internet, by sending an access request to a server. If a connection is established, some kind of welcome text for a home page might be displayed, "Welcome to D1 Web." 90. If the user selects "Options" 100 a list of selections can be displayed as shown in the following layout 110. For example, the

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different choices could be different links or just plain text, wherein a link is indicated by the underline "This is a ..." 120, 125 and a plain text have no underlining "This is a ..." 130. The dots "..." indicates that not all the text is visible, and is an example of continuous text. The text is typically alpha-numerical.

[0033] In this example the user selects to continue with pressing on the softkey as is indicated as Options 135, which brings us to the next layout 140. This layout shows a menu structure of items; "Home" 145, "Bookmarks" 150, "Select" 155 and "Display options" 160. The text which is inverted in "Display options" 160 is selected by 165, which brings us to Fig. 4b and the layout for Display options 170. In this layout the user has the following choices: Font 175, Size 180, Wrapped text 185 and Continuous text 190. In accordance with the present invention, the user is allowed to toggle between the continuous length (as shown in layout 110) and wrapped length, by providing a selectable item of either "Wrapped text" 185 or "Continuous text" 190. Other items are also shown in this layout, like Font 175 and Size 180, which gives the user further choices to adopt the text in a preferred manner. Since the information displayed in layout 110 is continuous and not all information is visible, the user chooses in this example to select Wrapped text 185.

[0034] By selecting Wrapped text, the text in layout 110 is changed to be displayed like the text in layout 200. Now, the user is able to read the whole text of the first text "This is a first link" 205 and a part of the second text "This is a" 210. When the user scrolls down the text in the display, by using navigation key 10 (Fig. 1), the remaining text from layout 110 is now visible from layout 215 and 220.

[0035] Although the invention has been described with respect to a particularly preferred embodiment, it should be appreciated that the invention

as defined by the claims extends beyond the particular features of the embodiment described to encompass modifications and variations to the embodiment not necessarily described.

5 ~~What~~ _____ ~~is~~ _____ ~~claimed~~ _____ ~~is:~~ |